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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/687,652	10/13/00	WANG H	1802.1003-00

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EXAMINER	
ANDRES, J	

ART UNIT	PAPER NUMBER
1646	4

DATE MAILED: 11/02/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)	
	09/687,652	WANG ET AL.	
	Examiner	Art Unit	
	Janet L Andres	1646	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-76 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) 1-76 are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-7, 42-44, and 69-73, drawn to methods of altering angiogenesis, classified in class 514, subclass 2.

II. Claims 8-15 and 40, drawn to methods of delivering drugs to arteries, classified in class 514, subclass 2.

III. Claims 16-22 and 44, drawn to methods of delivering drugs to veins, classified in class 514, subclass 2.

IV. Claims 23-28 and 34, drawn to transgenic mice expressing an artery-specific protein and methods of use, classified in class 800, subclasses 3 and 8.

V. Claims 29-33 and 35, drawn to transgenic mice expressing a vein-specific protein and methods of use, classified in class 800, subclasses 3 and 8.

VI. Claims 36, 37, 51, 52, 55, and 60, drawn to methods of identifying and isolating arterial cells and growing cell lines, classified in class 435, subclass 325.

VII. Claims 38, 39, 54, 56, and 61, drawn to methods of identifying and isolating venous cells and growing cell lines, classified in class 435, subclass 325.

VIII. Claims 45-50, drawn to drug screens, classified in class 435, subclass 7.1.

IX. Claims 57 and 58, drawn to methods of assessing drug effects on arterial cells, classified in class 424, subclass 9.2.

X. Claim 59, drawn to methods of assessing drug effects on venous cells, classified in class 424, subclass 9.2.

XI. Claim 62, drawn to a cell line transfected with an artery-specific protein, classified in class 435, subclass 325.

XII. Claim 63, drawn to a cell line transfected with a vein-specific protein, classified in class 435, subclass 325.

XIII. Claims 64 and 74, drawn to a cDNA library from arterial endothelial cells, classified in class 435, subclass 69.1.

XIV. Claim 65, drawn to drawn to a cDNA library from venous cells, classified in class 435, subclass 69.1.

XV. Claim 66, drawn to a method of identifying genes using a transgenic mouse, classified in class 800, subclass 8.

XVI. Claim 67, drawn to a method of gene therapy using arterial cells, classified in class 435, subclass 455.

XVII. Claim 68, drawn to a method of gene therapy using venous cells, classified in class 435, subclass 455.

XVIII. Claim 74, drawn to a method of screening by differential hybridization, classified in class 435, subclasses 6, 69.1, and 325.

XIX. Claim 75, drawn to anti-EphrinB2 antibodies, classified in class 530, subclasses 388.1 and 389.1.

XX. Claim 76, drawn to anti-EphB4 antibodies, classified in class 530, subclasses 388.1 and 389.1

The inventions are distinct, each from the other because of the following reasons:

The methods of Invention I are not related to those of Inventions II or III because they have different method steps, different mechanisms of action, different goals and require different reagents.

The methods of Invention I are not related to the mice of Inventions IV and V. The mice of Inventions IV and V can not be used in the methods of Invention I nor can the methods of Invention I be used with the mice of Inventions IV and V.

The methods of Invention I are not related to the methods of Inventions VI and VII. They have different method steps, require different reagents, and have different goals and outcome measures.

The methods of Invention I are not related to the methods of Inventions IX and X. The methods have different goals and different outcome measures and require different reagents.

The methods of Invention I are not related to the cell lines of Inventions XI and XII. The cells can not be used in or affected by the methods of Invention I.

The methods of Invention I are not related to the libraries of Inventions XIII and XIV. The libraries can not be used in or generated by the methods of Invention I.

The methods of Invention I are not related to the methods of Invention XV. The methods have different steps, require different reagents, and have different goals and outcome measures.

The methods of Invention I are not related to the methods of Inventions XVI and XVII. The methods have different goals and outcome measures and require different reagents and different method steps.

The methods of Invention I are not related to those of Invention XVIII. The methods have different goals and outcome measures and require different reagents and different method steps.

The methods of Invention I are distinct from the antibodies of Inventions XIX and XX. They can be accomplished with other reagents, such as peptide inhibitors, and the antibodies have other uses, such as protein purification.

The methods of Invention II are distinct from those of Invention III because they involve different cell types and different reagents.

The methods of Invention II and III are not related to the mice of Inventions IV or V. They can not be use in the mice, nor can the mice be used in the methods of Invention II.

The methods of Invention II and III are not related to the methods of Inventions VI or VII. They have different method steps, require different reagents, and have different goals and outcome measures.

The methods of Invention II and III are not related to the methods of Invention VIII. They have different goals, require different reagents and different method steps, and have different outcome measures.

The methods of Invention II and III are distinct from the methods of Inventions IX and X. They have different goals and different outcome measures.

The methods of Inventions II and III are not related to the cells of Inventions XI and XII. The cells can not be used in the methods.

The methods of Inventions II and III are not related to the libraries of Inventions XIII and XIV. The libraries can not be used in or generated by the methods.

The methods of Inventions II and III are not related to the methods of Invention XV. The methods have different goals and outcome measures and require different reagents and method steps.

The methods of Inventions II and III are not related to the gene therapy methods of Inventions XVI and XVII. The methods have different goals and outcome measures and require different reagents and method steps.

The methods of Inventions II and III are not related to the methods of Invention XVIII. The methods have different goals and outcome measures and require different reagents and different method steps.

The methods of Inventions II and III are distinct from the antibodies of Inventions XIX and XX. They can be performed using different reagents, such as peptides, and the antibodies have other uses, such as protein purification.

The mice of Invention IV are not related to the mice of Invention V. They express different proteins.

The mice of Inventions IV and V are not related to the methods of Inventions VI and VII. They can not be used in or affected by these methods.

The mice of Inventions IV and V are not related to the methods of Invention VIII. They can not be used in or affected by these methods.

The mice of Inventions IV and V are not related to the methods of Inventions IX and X. They can not be used in these methods.

The mice of Inventions IV and V are not related to the cells of Inventions XI and XII. They are physically distinct and have different uses.

The mice of Inventions IV and V are not related to the libraries of Inventions XIII and XIV. They can not be used to produce the libraries nor can the libraries be used in them.

The mice of Inventions IV and V are distinct from the methods of Invention XV. Mice other than those of Inventions IV and V can be used in the methods.

The mice of Inventions IV and V are not related to the gene therapy methods of Inventions XVI and XVII. They can not be used in or affected by these methods.

The mice of Inventions IV and V are not related to the methods of Invention XVIII. They can not be used in or produced by these methods.

The mice of Inventions IV and V are not related to the antibodies of Inventions XIX and XX. They are chemically and physically distinct and can not be used together or interchangeably.

The methods of Invention VI are not related to those of Invention VII. They involve different cell types and require different reagents.

The methods of Inventions VI and VII not related to the methods of Invention VIII. The methods have different goals and outcome measures and require different reagents and method steps.

The methods of Inventions VI and VII are not related to methods of Inventions IX and X. The methods have different goals and outcome measures and require different reagents and method steps.

The methods of Inventions VI and VII are not related to the cells of Inventions XI and XII. The methods can not be used to produce the cells.

The methods of Inventions VI and VII are distinct from the libraries of Inventions XIII and XIV because they have other uses, such as drug screens.

The methods of Inventions VI and VII are not related to the methods of Invention XV. The methods have different goals and outcome measures and require different reagents and method steps.

The methods of Inventions VI and VII are not related to the gene therapy methods of Inventions XVI and XVII. The methods have different goals and outcome measures and require different reagents and method steps.

The methods of Inventions VI and VII are not related to the methods of Invention XVIII. The methods have different goals and outcome measures and require different reagents and method steps.

The methods of Inventions VI and VII are distinct from the antibodies of Inventions XIX and XX because other molecules, such as peptides, can be used in the methods and the antibodies have other uses, such as protein purification.

The methods of Invention VIII are not related to the methods of Inventions IX and X. The methods have different goals and outcome measures and require different reagents and method steps.

The methods of Invention VIII are distinct from the cells of Inventions XI and XII because the cells have other uses, such as functional studies.

The methods of Invention VIII are not related to the libraries of Inventions XIII and XIV. They can not be used to generate the libraries, nor can the libraries be used in the methods.

The methods of Invention VIII are not related to the methods of Invention XV. The methods have different goals and outcome measures and require different reagents and method steps.

The methods of Invention VIII are not related to the gene therapy methods of Inventions XVI and XVII. The methods have different goals and outcome measures and require different reagents and method steps.

The methods of Invention VIII are not related to the methods of Invention XVIII. The methods have different goals and outcome measures and require different reagents and different method steps.

The methods of Invention VIII are distinct from the antibodies of Inventions XIX and XX because the methods detect other proteins and the antibodies can be detected in other ways, such as protein binding.

The methods of Inventions IX and X are not related to each other. They required different reagents and have different outcome measures.

The methods of Inventions IX and X are distinct from the transfected cells of Inventions XI and XII. The cells have other uses, such as binding studies, and other cells, such as naturally-occurring cells, can be used in the methods.

The methods of Inventions IX and X are not related to the libraries of Inventions XIII and XIV. The libraries can not be used in or produced by the methods.

The methods of Inventions IX and X are not related to the methods of Invention XV. The methods have different goals and outcome measures and require different reagents and method steps.

The methods of Inventions IX and X are not related to the gene therapy methods of Inventions XVI and XVII. The methods have different goals and outcome measures and require different reagents and method steps.

The methods of Inventions IX and X are not related to the methods of Invention XVIII. The methods have different goals and outcome measures and require different reagents and different method steps.

The methods of Inventions IX and X are distinct from the antibodies of Inventions XIX and XX. They can be used to assess other molecules, such as peptides, and the antibodies can be detected in other ways, such as by protein binding.

The cells of Inventions XI and XII are not related. They express different proteins and thus have different functional characteristics.

The cells of Inventions XI and XII are distinct from the libraries of Inventions XIII and XIV. They do not require the libraries and can not be used to generate them.

The cells of Inventions XI and XII are not related to the methods of Invention XV. They can not be used in or generated by the methods.

The cells of Inventions XI and XII are distinct from the gene therapy methods of Inventions XVI and XVII. They have other uses, such as drug screens.

The cells of Inventions XI and XII are distinct from the methods of Invention XVIII. They have other uses, such as drug screens.

The cells of Inventions XI and XII are not related to the antibodies of Inventions XIX and XX. They have different structural and functional properties and can not be used together or interchangeably.

The libraries of Invention XIII and XIV are distinct because they contain different cDNAs.

The libraries of Inventions XIII and XIV are not related to the methods of Invention XV. They can not be used in or generated by these methods.

The libraries of Inventions XIII and XIV are not related to the gene therapy methods of Inventions XVI and XVII. They can not be used in or produced by these methods.

The libraries of Inventions XIII and XIV are distinct from the methods of Invention XVIII because they have other uses, such as expression cloning.

The libraries of Inventions XII and XIV are not related to the antibodies of Inventions XIX and XX. They have different structural and functional properties and can not be used together or interchangeably.

The methods of Invention XV are not related to the gene therapy methods of Inventions XVI and XVII. The methods have different goals and outcome measures and require different reagents and different method steps.

The methods of Invention XV are not distinct from those of Invention XVIII. They have different method steps, require different reagents, and have different outcome measures.

The methods of Invention XV are not related to the antibodies of Inventions XIX and XX. The antibodies can not be used in or produced by these methods.

The methods of Invention XVI are not related to those of Invention XVII. They require different reagents and have different goals.

The methods of Invention XVI and XVII are not related to the methods of Invention XVIII. The methods have different goals and outcome measures and require different reagents and different method steps.

The methods of Inventions XVI and XVII are not related to the antibodies of Inventions XIX and XX. The antibodies can not be used in or produced by these methods.

The methods of Invention XVIII are not related to the antibodies of Inventions XIX and XX. The antibodies can not be used in or produced by the methods.

The antibodies of Inventions XIX and XX are not related to each other. They have different functional properties and different special structural characteristics.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and different searches are required for the different groups, restriction for examination purposes as indicated is proper.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janet Andres, Ph.D., whose telephone number is (703) 305-0557. The examiner can normally be reached on Monday through Friday from 8:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler, Ph.D., can be reached at (703) 308-6564. The fax phone number for this group is (703) 305-3014 or (703) 308-4242.

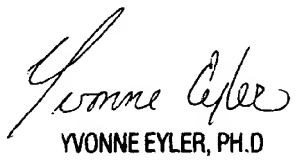
Communications via internet mail regarding this application, other than those under U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to **[yvonne.eyler@uspto.gov]**.

All Internet email communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly

set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark Office on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Janet Andres, Ph.D.
October 24, 2001



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